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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,153	08/22/2007	Benjamin Kingsley Stuart Peacock	NOR-1397US	5056
37172 7590 03/10/2009 WOOD, HERRON & EVANS, LLP (NORDSON) 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			EXAMINER DAVIS, OCTAVIA L	
			ART UNIT 2855	PAPER NUMBER
			NOTIFICATION DATE 03/10/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/599,153	PEECOCK ET AL.	
	Examiner	Art Unit	
	OCTAVIA DAVIS	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/21/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/21/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgment is made of applicant's preliminary amendment filed 9/21/06.

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because of the legal phraseology term "means" on line 4.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeh et al (900) in view of Hutter, III (7,389,698).

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Regarding claims 11 – 26, Yeh et al disclose a bonding strength testing device comprising a bond strength tester 200a an electrically conductive ball 130 adhered to a substrate 120, moving the ball in a direction substantially orthogonal to the plane of adherence of the ball while urging the substrate against the ball with an impact apparatus 220 and stopping the substrate (See Col. Col.3, lines 62 – 67 and Col 6, lines 13 – 25) but does not disclose gripping the ball with a test tool, providing a frame, moving the gripper on an axis orthogonal to the adherence plane, clamping the substrate to a platen, providing a pneumatic ram to urge the substrate against the ball and to urge the substrate towards the gripper, applying air under pressure to the ram in an amount sufficient to ensure a compressive load between the ball and the substrate and an abutment provided for the substrate by direct contact between the frame and the ram, substrate and platen, wherein the substrate and ball are moved in unison until the substrate is restrained by the abutment. However, Hutter, III discloses a nutplate bond tester unit comprising jaw means 78 for gripping a member 56, a frame 50, a pneumatic drive cylinder unit 66 that displaces a drive ram 68 of which urges a substrate 14 towards the jaws 78 and member 12, the drive arm 68 being coupled to a compressed air source, an abutment 72, 73 for the substrate 14 that provides direct contact between the pneumatic means 66, 68, the substrate 14 and the plate 18, the jaws 78 clamp the substrate 14 to a platen 18 that functions in a floating or fixed manner (See Col. 4, lines 9 – 19 and 23 – 34, Col. 5, lines 43 – 58 and Col. 6, lines 2 – 14, See Fig. 10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yeh et al according to the teachings of Hutter, III for the purpose of, advantageously providing a system and method for quickly and easily confirming adequate bond strength attachment of a member to a substrate and that provides a clear indication of insufficient bond strength attachment (See Hutter, III, Col. 1, lines 60 – 65).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jian et al (6,912,915) disclose an apparatus for shear testing bonds on a silicon substrate.

Lee et al (6,564,648) disclose a method and apparatus for inspecting solder balls on a ball grid array package.

Cox (2004/0103726A1) discloses bond test systems with an offset shear tool.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OCTAVIA DAVIS whose telephone number is (571)272-2176. The examiner can normally be reached on Mon-Fri 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lisa Caputo can be reached on 571-272-2388. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Lisa M. Caputo/

Supervisory Patent Examiner, Art Unit 2855